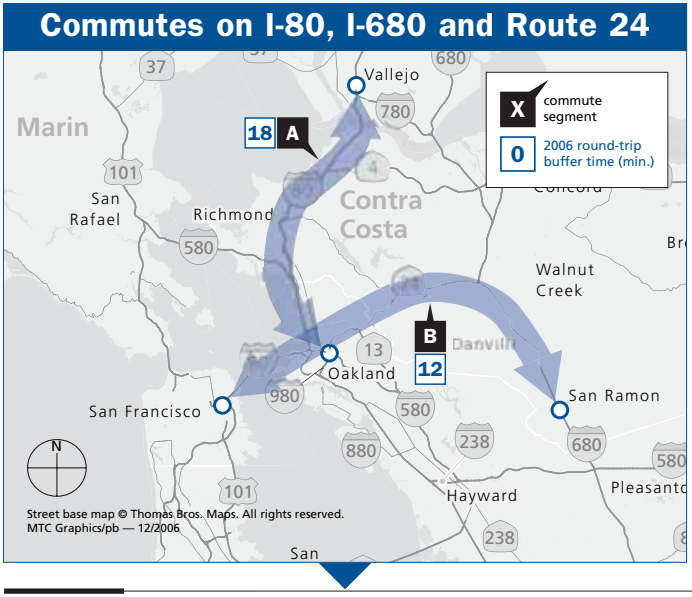
Average Commute Times Remain Steady on Selected Routes, But Unpredictability Increases

State of the System 2006 reports for the first time on the reliability of driving commutes in the Bay Area. Veteran commuters know how long it usually takes to drive to or from their place of work. They also know to expect the unexpected. And to be reasonably sure of arriving on time, these drivers have learned to build a cushion into their schedules. The size of this cushion — or buffer time — is a measure of the reliability of a given commute. The smaller the buffer time, the more reliable the commute. Strategies such as freeway ramp-metering and prompt responses to collisions typically reduce buffer times.

Traffic speed data is collected by automated sensors in the freeway pavement throughout the course of a year. The speed data for typical weekdays (Tuesday, Wednesday, Thursday) can be used to gauge average start-to-finish driving times for seven typical Bay Area commutes, as well as the time needed to complete 95 percent (19 out of 20) of these peak-hour trips on schedule (95th percentile travel time). The difference between the two is the buffer time. Each of the monitored commutes begins or ends in one of the region's three largest cities (San Jose, San Francisco or Oakland). Future *State of the System* reports will provide a more complete picture of Bay Area commute reliability by encompassing a larger number of long-distance commute segments.

- For the seven round-trip commutes tracked in this year's report, average travel times were largely unchanged from 2004 through 2006. Notable exceptions were the commutes along U.S. 101 between San Jose and San Francisco, which lengthened during this period.
- Despite the relative stability in average driving times, commute reliability weakened from 2004 to 2006, with required buffer times rising on all but one of the seven monitored routes. Buffer times nearly doubled from 2004 to 2006 on the evening commute from San Jose to San Francisco (from 7 minutes in 2004 to 13 minutes in 2006). The round-trip buffer time for both legs of this commute (including the morning drive from San Francisco to San Jose) nearly doubled, rising to 22 minutes in 2006 from 12 minutes in 2004.
- The only commute segment on which reliability improved from 2004 to 2006 is the morning drive along U.S. 101 from San Jose to San Francisco, which required 10 minutes of buffer time in 2004 and just 8 minutes in 2006.

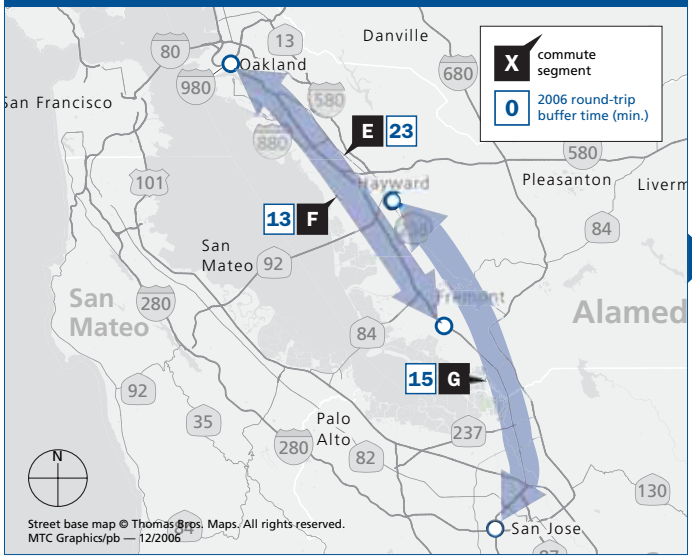


Reliability of Selected Commutes on Interstates 80 and 680 and Route 24

	Commute	Distance (One-Way)	Travel Time in Minutes 2004	2005	2006	Change in Minutes 2004–2006
95th Percentile, Average and Buffer Times for AM trips arriving at 8:30 AM and PM trips arriving at 6 PM						
A	**VALLEJO–OAKLAND**	*23 miles*				
	AM: Commute to Oakland - 95th percentile travel time		40	39	44	+4
	Average travel time		31	30	32	+1
	Buffer time		***9***	***9***	***12***	***+3***
	PM: Commute to Vallejo - 95th percentile travel time		38	40	40	+2
	Average travel time		33	32	34	+1
	Buffer time		***5***	***8***	***6***	***+1***
	Round-trip buffer time		***14***	***17***	***18***	***+4***
B	**SAN RAMON–SAN FRANCISCO**	*30 miles*				
	AM: Commute to San Francisco - 95th percentile travel time		44	44	46	+2
	Average travel time		40	39	40	0
	Buffer time		***4***	***5***	***6***	***+2***
	PM: Commute to San Ramon - 95th percentile travel time		NA	44	45	NA
	Average travel time		NA	37	39	NA
	Buffer time		***NA***	***7***	***6***	***NA***
	Round-trip buffer time		***NA***	***12***	***12***	***NA***

Commutes on U.S. 101 (Peninsula)

Commutes on I-880



Reliability of Selected Commutes on U.S. 101 (Peninsula)

	Commute	Distance (One-Way)	Travel Time in Minutes 2004	2005	2006	Change in Minutes 2004–2006
95th Percentile, Average and Buffer Times for AM trips arriving at 8:30 AM and PM trips arriving at 6 PM						
C	**SAN FRANCISCO–SAN JOSE**	*43 miles*				
	AM: Commute to San Jose - 95th percentile travel time		56	56	60	+4
	Average travel time		51	50	51	0
	Buffer time		***5***	***6***	***9***	***+4***
	PM: Commute to San Francisco - 95th percentile travel time		57	61	69	+12
	Average travel time		50	51	56	+6
	Buffer time		***7***	***10***	***13***	***+6***
	Round-trip buffer time		***12***	***16***	***22***	***+10***
D	**SAN JOSE–SAN FRANCISCO**	*43 miles*				
	AM: Commute to San Francisco - 95th percentile travel time		59	59	63	+4
	Average travel time		49	49	55	+6
	Buffer time		***10***	***10***	***8***	***–2***
	PM: Commute to San Jose - 95th percentile travel time		63	66	71	+8
	Average travel time		53	55	60	+7
	Buffer time		***10***	***11***	***11***	***+1***
	Round-trip buffer time		***20***	***21***	***19***	***–1***

Reliability of Selected Commutes on Interstate 880

	Commute	Distance (One-Way)	Travel Time in Minutes 2004	2005	2006	Change in Minutes 2004–2006
95th Percentile, Average and Buffer Times for AM trips arriving at 8:30 AM and PM trips arriving at 6 PM						
E	**FREMONT–OAKLAND**	*22 miles*				
	AM: Commute to Oakland - 95th percentile travel time		39	43	45	+6
	Average travel time		31	30	32	+1
	Buffer time		***8***	***13***	***13***	***+5***
	PM: Commute to Fremont - 95th percentile travel time		38	38	39	+1
	Average travel time		29	28	29	+0
	Buffer time		***9***	***10***	***10***	***+1***
	Round-trip buffer time		***17***	***23***	***23***	***+6***
F	**OAKLAND–FREMONT**	*22 miles*				
	AM: Commute to Fremont - 95th percentile travel time		30	30	31	+1
	Average travel time		26	24	26	0
	Buffer time		***4***	***6***	***5***	***+1***
	PM: Commute to Oakland - 95th percentile travel time		31	33	35	+4
	Average travel time		26	26	27	+1
	Buffer time		***5***	***7***	***8***	***+3***
	Round-trip buffer time		***9***	***13***	***13***	***+4***
G	**HAYWARD–SAN JOSE**	*25 miles*				
	AM: Commute to San Jose - 95th percentile travel time		39	41	42	+3
	Average travel time		33	32	34	+1
	Buffer time		***6***	***9***	***8***	***+2***
	PM: Commute to Hayward - 95th percentile travel time		NA	NA	37	NA
	Average travel time		NA	NA	30	NA
	Buffer time		***NA***	***NA***	***7***	***NA***
	Round-trip buffer time		***NA***	***NA***	***15***	***NA***

Source: Performance Measurement System 7.1, Caltrans

Buffer time is the amount of additional time one needs to allow in order to arrive on time 95% of the time (19 of 20 trips). The buffer time is the difference between the 95th percentile travel time and the average travel time.

Travel times reflect the average or 95th percentile for all trips, including those in the carpool lane. Travelers using the carpool lanes will generally experience shorter travel times than those shown, and those in other lanes may have slightly longer travel times.